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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/571,582

03/10/2006

Kouichi Kitahata

1422-0712PUS1

9795

2292 7590 10/30/2008  
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EXAMINER

NATHAN, SHYAM

ART UNIT

PAPER NUMBER

1611

NOTIFICATION DATE

DELIVERY MODE

10/30/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/571,582	<b>Applicant(s)</b> KITAHATA ET AL.	
	<b>Examiner</b> SHYAM NATHAN	<b>Art Unit</b> 1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/12/2006, 03/10/2006</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 1-7 are pending. This is the first Office Action on the merits of the claims.

#### ***Priority***

The earliest effective U.S. filing date afforded the instantly claimed invention has been determined to be 09/10/2004, the filing date of application PCT/JP04/13574.

#### ***Claim Objections***

Claim 3 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,4,5,6,7 are rejected under 35 U.S.C. 102(anticipated) as being anticipated by Garlick, Jr. et al (U.S. Patent No. 5,695,746; Issued Dec.9,1997) as evidenced by (<http://www.minerals.net/mineral/silicate/tecto/quartz/sio2poly.htm> and <http://www.minerals.net/glossary/terms/t/trigonal.htm>).

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Instant claims 1,2,4,5,6,7 are drawn to a substance-supporting porous silica, wherein a porous silica supports a substance selected from the group consisting of menthols, volatile substances, thermal substances, plant polyphenols and organic colorants, And further comprising an emulsifying agent. Claim 7 is drawn to a coolant comprising a porous silica. Wherein, the substance-supporting porous silica according to claim 1, wherein the porous silica has an average particle size of from 50 nm to 100  $\mu\text{m}$  or microns. Instant claim 5 is drawn to claim 1, wherein the pore of the porous silica forms a hexagonal structure. (Note: Hexagonal is understood by the examiner in two facets: the first is a regular hexagon or hexagonal crystal structure, which has: four axes, three are equal in length and lie at an angle of  $120^\circ$  from each other. The fourth is either longer or shorter but must be at a right angle toward the other corners, The second is that true hexagonal minerals have six-fold symmetry. Examiner, has taken the first facet or meaning.

Garlick Jr. et al. teaches of a liquid dentifrice composition that comprises menthol (Abstract and column 2, lines 7-9), which is a coolant, combined with porous silica xerogels having an average particle diameter/size of 2-30 microns (Abstract and column 2, lines 47-53) and comprises surfactants (also known as emulsifiers), such as sodium lauryl sulfate (Abstract and column 3, lines 45-50). Syloid xerogels are porous silica

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xerogels that act as structuring thickeners and therefore support the menthol in the form of a gel/aerogel. (Abstract and column 3, lines 7-10)

In instant claim 5, the hexagonal structure of the pore of the porous silica would be inherent to the silica because quartz, which is the most stable and most common form of silica, are found only in alpha quartz specimens which is really part of the hexagonal crystal system. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garlick, Jr. et al (U.S. Patent No. 5,695,746; Issued Dec.9, 1997) and Hayes et al.(US Patent NO. 4,562,063; Issued Dec.31,1985).

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Instant claim 3 is drawn to the substance-supporting porous silica according to claim 1 or 2, wherein the porous silica has a pore having an average pore size of from 0.8 to 20 nm.

Garlick Jr. et al. teaches of a liquid dentifrice composition that comprises menthol (Abstract and column 2, lines 7-9), which is a coolant, combined with porous silica xerogels having an average particle diameter/size of 2-30 microns (Abstract and column 2, lines 47-53). But Garlick Jr. et al. does not teach of silica xerogels having an average pore size of .8 to 20 nm.

Hayes et al. teaches of a dentifrice composition that comprises a silica gel with a pore diameter of 1.5 to 2.5 nm (Abstract and column 2, line 22).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have used the silica xerogels of Hayes et al. for the composition of Garlick et al. because both types of xerogels are used in dentifrice compositions and have an average particle size of around 1-30 microns.

One would have been motivated to do so because the xerogels of Hayes et al. are less abrasive than the silica xerogels of Garlick Jr. et al. (which follows U.S. Pat. NO. 3,538,230) because the xerogels of Hayes et al. have an increased surface area and are therefore, are less abrasive. (Abstract and column 1, lines 50-56).

Conclusion:

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NO Claims Allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHYAM NATHAN whose telephone number is (571)270-5753. The examiner can normally be reached on Mon-Thurs 8:30a.m. - 5:00p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SN

/Sharmila Gollamudi Landau/  
Supervisory Patent Examiner, Art Unit 1611